



DEPARTMENT OF HEPATIC & GASTROINTESTINAL PATHOLOGY

Kamal G. Ishak, M.D., Ph.D.
Chairperson
Date of Appointment - 10 March 1974

MISSION

To provide expertise in consultation, support the educational objectives of the Armed Forces Institute of Pathology and this department, both intramurally and extramurally, and conduct research in diseases of the liver and gastrointestinal tract.

ORGANIZATION

The department is organized into two divisions, a center for special studies, and the office of the chairperson.

Division of Hepatic Pathology - Zachary D. Goodman, M.D., Ph.D.

Division of Gastrointestinal Pathology - Leslie H. Sobin, M.D.

Center for Special Studies in Hepatotoxicity - Hyman J. Zimmerman, M.D.

STAFF

Medical

Kamal G. Ishak, M.D., Ph.D.

Administrative

Fanny X. Revelo

Dr. Ishak is registrar, Registry of Hepatic and Gastrointestinal Pathology, ARP. Dr. Ishak serves as clinical consultant to the Liver Unit, Clinical Center, NIH. He was also reappointed as clinical professor at USUHS, Bethesda, Md., and as professorial lecturer, Mt Sinai School of Medicine, N.Y.

CONSULTATION

See Division Reports

The total number of consultation cases of the two divisions was 4,137. The staff of the two divisions reviewed 463 intramural consultations.

RESEARCH

See Division Report

EDUCATION

Members of the staff of this department gave 80 lectures, 8 courses or workshops, and 5 slide seminars in the metropolitan D.C. area, nationally and internationally.

PRESENTATIONS

The following lectures, courses, and seminars were presented by Dr. Ishak:

1. "Pathology of Developmental and Metabolic Liver Diseases." Short course presented at the 84th Annual Meeting of the U.S. Canadian Academy of Pathology, Ontario, Canada, March 16, 1995.
2. "Benign Tumors of the Liver" and "Malignant Tumors of the Liver." Lectures presented at the "Update and Review of Anatomic Pathology," AFIP, April 14, 1995.
3. "Chronic Hepatitis" and "Chronic Cholestasis." Lectures presented at Wilford Hall Medical Center, Lackland AFB, San Antonio, Texas, May 9, 1995.
4. "Liver Pathology" and "Citywide Conference." Slide conferences held at Wilford Hall Medical Center, Lackland AFB, San Antonio, Texas, May 9, 1995.
5. "Q Fever Hepatitis." Lecture presented at the 28th Annual Meeting of the International Liver Group, Glasgow, Scotland, UK, June 1-4, 1995.
6. "Presentation of Four Cases of Unusual Causes of Chronic Cholestasis." 28th Annual Meeting of the International Liver Group, Glasgow, Scotland, UK, June 1-4, 1995.
7. "Response of the Human Liver to Drugs and Toxins." Invited lecture presented at the 14th International Symposium, Society of Toxicologic Pathologists, San Diego, Calif., June 12-15, 1995.
8. "Diseases of the Intrahepatic Bile Ducts." Invited lecture presented at the University of Maryland Medical Center, Baltimore, Md., June 28, 1995.
9. "Slide Conference." Department of Pathology, University of Maryland Medical Center, Baltimore, Md., June 28, 1995.
10. Presentation of four lectures on chronic hepatitis, chronic cholestasis, granulomas of the liver, and tumors of the liver at the course "Controversies and Recent Advances in Surgical Pathology," Snowmass, Colo., July 2-6, 1995.
11. Course directorship and presentation of six lectures on chronic hepatitis, developmental diseases, metabolic disease, alcoholic liver disease, drug-induced liver injury, and benign tumors of the liver. "Hepatopathology 1995," course held at Washington Marriott Hotel, Washington D.C., September 13-15, 1995.
12. Presentation of a case of focal nodular hyperplasia at the course "Practical Surgical Pathology," Mayo Clinic, Rochester, Minn., September 16, 1995.
13. "Hepatobiliary Sarcoidosis," Lecture presented at Jürgen Ludwig Symposium on Biliary Disorders," Mayo Clinic, Rochester, Minn., September 16-18, 1995.
14. "Developmental Diseases of the Liver" and "Inherited Metabolic Diseases of the Liver." Keynote lectures presented at the 2nd International Symposium on Pediatric Hepatology, Puebla, Mexico, October 2 and 3, 1995.
15. "Alcoholic Liver Disease." Lecture presented at Medical School, University of Puebla, Mexico, October 2, 1995.
16. Slide seminar on "Medical and Surgical Diseases of the Liver," presented to residents, fellows, and staff, Departments of Pathology and Gastroenterology, School of Medicine, Yale University, New Haven, Conn., October 18, 1995.
17. "Chronic Hepatitis." Medical Grand Rounds, School of Medicine, Yale University, New Haven, Conn., October 18, 1995.
18. Cochairman, session on "Inborn Errors of Metabolism: The Liver as Both Target and Culprit." Postgraduate course, 46th Annual Meeting of the American Association for the Study of Liver Diseases, Chicago, Ill., November 3 and 4, 1995.
19. Moderator, "Meet the Professor Luncheon on Storage Diseases of the Liver: Biochemical and Pathology Aspects." Postgraduate course, 46th Annual Meeting of the American Association for the Study of Liver Diseases, Chicago, Ill., November 3 and 4, 1995.
20. Slide seminar on "Granulomas of the Liver: Variations on a Theme." Staff Conference, AFIP, Washington, D.C., November 15, 1995.

PUBLICATIONS

The staff of the two divisions published a total of 28 papers in professional journals, 5 book chapters, 4 books, and 8 abstracts.

The chairperson was the author or a coauthor of the following publications:

Journal Articles

1. Goodman ZD, Ishak KG. Histopathology of hepatitis C virus infection. *Semin Liver Dis.* 1995;15:70-81.
2. Goodman ZD, McNally PR, Davis DR, Ishak KG. Autoimmune cholangitis: a variant of primary biliary cirrhosis: clinicopathologic and serologic correlations in 200 cases. *Dig Dis Sci.* 1995;40:1232-1242.
3. Ishak KG, Baptista A, Bianchi L, et al. Histological grading and staging of chronic hepatitis. *J Hepatol.* 1995;22:696-699.
4. Banks AT, Zimmerman HJ, Ishak KG, Harter JG. Diclofenac-associated hepatotoxicity: analysis of 180 cases reported to the Food and Drug Administration as adverse reactions. *Hepatology.* 1995;22:820-827.
5. Nzeako UC, Goodman ZD, Ishak KG. Comparison of tumor pathology with duration of survival of North American patients with hepatocellular carcinoma. *Cancer.* 1995;76:579-588.
6. Zimmerman HJ, Ishak KG. General aspects of drug-induced liver disease. *Gastroenterol Clin North Am.* 1995;24:739-757.
7. Kremer JM, Kaye GI, Kaye NW, Ishak KG, Axiotis CA. Light and electron microscopic analysis of sequential liver biopsy samples from patients with rheumatoid arthritis receiving long term methotrexate therapy. *Arthritis Rheum.* 1995;38:1194-1203.
8. Soini Y, Welsh JA, Ishak KG, Bennett WP. p53 mutations in primary hepatic angiosarcomas not associated with vinyl chloride exposure. *Carcinogenesis.* 1995;16:2879-2881.
9. Ishak KG, Zimmerman HJ. Morphologic spectrum of drug-induced hepatic disease. *Gastroenterol Clin North Am.* 1995;24:759-786.

Books and Chapters

1. Ishak KG: Hepatic granulomas. In: *Advances in Pathology and Laboratory Medicine.* Chicago, Ill: Mosby; 1995:8:247-361.
2. Ishak KG, Markin RS: Liver. In: Damjanov I, Linder J, eds. *Anderson's Pathology.* 10th ed. Chicago, Ill: Mosby-Year Book; 1995:1779-1858.
3. Zimmerman HJ, Ishak KG. Non-alcoholic steatohepatitis and other forms of pseudoalcoholic liver disease. In: Hall P, ed. *Alcoholic Liver Disease: Pathology and Pathogenesis.* 2nd ed. London, England: Edward Arnold; 1995:175-198.
4. Ishak KG. Benign tumors of the liver. In: Hanbrich WS, Schaffner F, Berk JE, eds. *Bockus Gastroenterology.* 5th ed. Philadelphia, Pa: WB Saunders; 1995:3:2428-2443.



DIVISION OF HEPATIC PATHOLOGY

Zachary D. Goodman, M.D., Ph.D.
 Chief
 Date of Appointment - 1 January 1991

MISSION

To provide consultation, research, and education in pathology of the liver, biliary tract, and gallbladder.

STAFF

Medical

- Lionel Rabin, M.D., Staff Pathologist
- Linda A. Murakata, LCDR, MC, USNR, Staff Pathologist
- (A) Omar J. Perez-Jimenez, M.D. (Enrique Mendez Fellow, ARP)
- (A) Gregory A. Derringer, M.D. (Callender-Binford Fellow, ARP)
- (D) Ugochukwu Nzeako, M.D., M.P.H. (Callender-Binford Fellow, ARP)
- (D) Helen Remotti, M.D. (Callender-Binford Fellow, ARP)

Dr. Goodman continues as adjunct associate professor of pathology at Georgetown University, assistant professor of pathology at USUHS, and consultant in surgical pathology at WRAMC. He is an associate editor of *Seminars in Liver Disease* and a member of the editorial board of *Hepatology*.

Dr. Rabin continues as a clinical consultant to the Liver Unit, Clinical Center, NIH, clinical associate professor of pathology at USUHS, and adjunct professor of pathology at Temple University, Philadelphia, Pa. He is a member of the AFIP Credentials Committee.

Dr. Murakata serves as associate editor of the Center for Scientific Publications. She is a member of the AFIP Biosafety Committee.

Dr. Nzeako and Remotti finished their fellowships and departed. Dr. Derringer joined the division as a Callender-Binford fellow. Dr. Perez-Jimenez, who is board certified in internal medicine, is the first recipient of the newly created Mendez Fellowship in Clinical Pathology.

CONSULTATION

<i>Cases</i>	<i>Received</i>
Military	301
Federal	328
Intramural	142
Civilian	842
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Total	1,613

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RESEARCH

Studies in progress include:

1. A randomized controlled trial of alpha and thymosin alpha-1 in patients with hepatitis C antibody-positive chronic active hepatitis.
2. Correlation of serum hepatitis C RNA levels with ability to detect viral RNA in paraffin-embedded tissue.
3. Relationship of hepatitis C genotype to serum ANA titers and ALT titers.
4. Autoimmune (lupoid) hepatitis. Clinicopathologic correlations and comparison to hepatitis C.
5. Hepatocellular carcinoma in North America. Clinical, pathologic, and follow-up studies of over 1,600 cases of hepatocellular carcinoma accessioned at AFIP since 1980.
6. Intrahepatic cholangiocarcinoma. Clinicopathologic and immunohistochemical studies.

EDUCATION

The members of the division conducted daily microscopic pathology conferences for the benefit of the staff and rotating fellows and residents. The Thursday Clinicopathologic Conference, now held for 30 consecutive years, continues to attract hepatologists, gastroenterologists, pathologists, and surgeons from many local federal and civilian institutions. The sessions are attended by an average of 15 to 20 clinicians and pathologists (who earn CME credit for attending).

Thirteen fellows in gastroenterology and nine pathologists from military and civilian hospitals were trained for periods of 2 weeks to 3 months. Trainees attended the departmental conferences, reviewed teaching material, and had the opportunity to watch videotapes of lectures given at the 1993 Hepatic Pathology Course.

This year's Annual Hepatic Pathology Course, cosponsored by the AFIP, the ARP, the American Association for the Study of Liver Diseases, and the American Gastroenterological Association was held in Washington, D.C., and was given once again in conjunction with a similar course given by the Division of Gastrointestinal Pathology. Both courses were attended by over 70 pathologists and clinicians. This was followed by a 2-day slide review laboratory course on liver biopsy interpretation, attended by approximately one half of those who attended the lectures, which was enthusiastically received by the registrants.

GOALS

1. To continue providing the highest quality consultations.
2. To continue to participate in AFIP/ARP educational programs as well as national and international meetings.
3. To pursue collaborative studies with other federal agencies and civilian medical centers and to use archival AFIP material for clinicopathologic and other studies.

PRESENTATIONS

The following lectures, courses, and workshops were presented by members of the division:

1. Monthly Liver Biopsy Clinicopathologic Correlation Review, Temple University School of Medicine, Philadelphia, Pa. (Rabin).
2. "Controversies and Recent Advances in Surgical Pathology"; course director and lectures on "Chronic (Active) Hepatitis," "Vascular Diseases of the Liver," and "Evaluation of Hepatic Masses"; CME course sponsored by AFIP and the American Registry of Pathology, Orlando, Fla., February 13-17 (Goodman).
3. "Introduction to Liver Disease" (4 lectures), sophomore pathology course, Georgetown University School of Medicine, Washington, D.C., April 3-6, 1995 (Goodman).
4. "Inflammatory Diseases of the Liver," presented at the AFIP course "Problems in Anatomic Pathology," April 7 (Goodman).
5. "Interpretation of Liver Biopsies," presented to Georgetown University School of Medicine, Division of Gastroenterology, May 7 (Rabin).
6. "Chronic Hepatitis," presented to The George Washington University School of Medicine, Department of Pathology, Washington, D.C., May 9 (Goodman).
7. "Chronic Liver Disease, Diagnosis and Differential Diagnosis by Liver Biopsy--Parts I and II," presented at Current Issues in Surgical Pathology, CME course sponsored by The University of Texas Southwestern Medical Center, Dallas, Texas, May 12 (Goodman).
8. "Pathology of Liver and Biliary Tract," presented at "Diagnostic Pathology '95," CME course sponsored by the United States and Canadian Academy of Pathology, New Orleans, La., August 10 (Goodman).
9. "Introduction to Liver Pathology," presented at "Hepatopathology '95," CME course sponsored by AFIP and ARP, September 13 (Goodman).
10. "Acute Hepatitis, Pathology," presented at "Hepatopathology '95," CME course sponsored by AFIP and ARP, September 13 (Goodman).
11. "Chronic Cholestasis, Pathology" presented at "Hepatopathology '95," CME course sponsored by AFIP and ARP, September 14 (Goodman).
12. "Problems in Gallbladder and Biliary Pathology," presented at "Hepatopathology '95," CME course sponsored by AFIP and ARP, September 15 (Murakata).
13. "Liver in Systemic Diseases," presented at "Hepatopathology '95," CME course sponsored by AFIP and ARP, September 15 (Rabin).
14. "Hepatocellular Carcinoma," presented at "Hepatopathology '95," CME course sponsored by AFIP and ARP, September 15 (Nzeako).
15. "Malignant Tumors of the Liver," presented at "Hepatopathology '95," CME course sponsored by AFIP and ARP, September 15 (Goodman).
16. "Inflammatory Diseases of the Liver: A Histologic Approach to Diagnosis," CME workshop presented at semiannual meeting of American Society of Clinical Pathologists, New Orleans, La., September 21 (Goodman).
17. "Liver Histopathology," presented at "Gastroenterology Board Review Course" sponsored by George Washington University, Washington, D.C., October 11 (Goodman).
18. "Liver Biopsy: Still the Gold Standard in Diagnostic Hepatology," faculty of symposium presented at annual meeting of American College of Gastroenterology, New York, N.Y., October 18 (Goodman).
19. "Cholestasis and Cholestatic Syndromes" and "Recurrent Pyogenic Cholangitis," presented at the AFIP course "Difficult Diagnoses in Surgical Pathology," Charleston, S.C., October 16 (Goodman).
20. "Chronic Cholestatic Syndromes in the Adult," presented to Blue Ridge Pathology Society,

Salem, Va., October 26 (Rabin).

21. "Introduction to Liver Pathology I & II," presented to Walter Reed Army Medical Center, Division of Gastroenterology, December 1 and 8 (Goodman).

PUBLICATIONS

Journal Articles

1. Goodman ZD, Ishak KG. Histopathology of hepatitis C virus infection. *Semin Liv Dis*. 1995;15:70-81.
2. Goodman ZD, McNally PR, Davis DR, Ishak KG. Autoimmune cholangitis: a variant of primary biliary cirrhosis: clinicopathologic and serologic correlations in 200 cases. *Dig Dis Sci*. 1995;40:1232-1242.
3. Nzeako UC, Goodman ZD, Ishak KG. Comparison of tumor pathology with duration of survival of North American patients with hepatocellular carcinoma. *Cancer*. 1995;76:579-588.
4. Buetow PC, Buck JL, Pantograg-Brown L, Ros PR, Devaney K, Goodman ZD, Cruess DF. Biliary cystadenoma and cystadenocarcinoma: clinical-imaging-pathologic correlation with emphasis on the importance of ovarian stroma. *Radiology*. 1995;196:805-810.
5. Murakata LM, Goodman ZD. Type C viral hepatitis, type D (Delta hepatitis). *ASCP Check Sample*. 1995;23:AP 95-7(AP-251):93-110.
6. Sherman KE, Lewey SM, Goodman ZD. Talc in the liver of patients with chronic hepatitis C infection. *Am J Gastroenterol*. 1995;90:2164-2166.
7. Carr NJ, Monihan JM, Nzeako UC, Murakata LA, Sobin LH. Expression of proliferating cell nuclear antigen in hyperplastic polyps, adenomas and inflammatory cloacogenic polyps of the large intestine. *J Clin Pathol*. 1995;48:46-52.

Books and Chapters

1. Goodman ZD. Non-parenchymal and metastatic malignant tumors of the liver. In: *Bockus Gastroenterology*. 5th ed. Philadelphia, Pa: WB Saunders Co., 1995:2488-2500.
2. Goodman ZD. Hepatic manifestations of systemic lupus erythematosus. In: Antonovych TT, ed. *Pathology of Systemic Lupus Erythematosus*. Washington, D.C: Armed Forces Institute of Pathology, American Registry of Pathology; 1995:133-136.

Abstracts

1. Sherman KE, Lewey S, Creager R, Goodman ZD. Talc crystals in the liver of patients with chronic hepatitis C infection. *Gastroenterology*. 1995;108:A1168.
2. McCormick SE, Sjogren MH, Goodman ZD, Maydonovitch CL. Lack of correlation between liver histology and alanine aminotransferase elevation or HCV RNA quantitative titer in patients with chronic hepatitis C. *Am J Gastroenterol*. 1995;90:1625.
3. Remotti HE, Goodman ZD, Devaney K, Ishak KG. Autoimmune hepatitis: clinicopathologic features of 30 cases and a comparison with chronic hepatitis C. *Hepatology*. 1995;22:479A.




DIVISION OF GASTROINTESTINAL PATHOLOGY

Leslie H. Sobin, M.D.

Chief

Date of Appointment - 1 January 1991

MISSION

The division is a unit of the Department of Hepatic and Gastrointestinal Pathology with a mission of consultation, education, and research.

STAFF

Medical

Leslie H. Sobin, M.D., FRCPath, Chief

- (D) Motaz Albahra, LCDR, MC, USNR, Staff Pathologist
- (D) Alaaelden M. Elsayed, Maj, USAF, MC, FS, Staff Pathologist
- Theresa S. Emory, MAJ, MC, USA, Staff Pathologist
- (A) Paul Fontelo, LTC, MC, USA, Staff Pathologist
- James R. Hallman, Maj, USAF, MC, Staff Pathologist
- (A) Mark Lowry, MAJ, MC, USA, Staff Pathologist

Administrative

- (D) Margaret C. King, Secretary
- (A) Mayra E. Aguilera, Secretary (ARP)

Dr. Sobin has continued in his roles as associate editor of the AFIP Atlas of Tumor Pathology, chairman of the TNM/Prognostic Factors Project of the International Union Against Cancer, head of the WHO Collaborating Center on International Histological Classification of Tumors, member of the World Health Organization (WHO) Expert Advisory Panel on Cancer, and consultant to the American Joint Committee on Cancer (AJCC).

Dr. Sobin was reappointed as professor of pathology at the Uniformed Services University of the Health Sciences (USUHS). He continues as adjunct professor of pathology, Cornell University Medical College, and adjunct professor of pathology, Georgetown University Medical College. He is a member of the Scientific Advisory Board of the WHO Collaborating Center for the Prevention of Colorectal Cancer.

Dr. Sobin serves as director of the Center for Scientific Publications. About two thirds of his time is available to the Division of Gastrointestinal Pathology.

Dr. Fontelo joined the division in May from the Uniformed Services University of the Health Sciences (USUHS), where he was associate professor of pathology and assistant professor of preventive medicine and biometrics. Dr. Fontelo is a diplomate of the American Board of Pathology in anatomic and clinical pathology. He has a master of public health degree from Johns Hopkins University. Dr. Fontelo pioneered the utilization of the World Wide Web for delivering interactive CME and was one of first accredited providers of CME on the Internet.

Dr. Fontelo assumed the directorship of the Telepathology Program upon the departure of Dr. Elsayed. He is cochairman of the AFIP's World Wide Web (WWW) Committee and a member of the Telemedicine Working Group, the Department of Defense Process Action Team for a Consolidated Military Genetics/DNA Program, and the Medical Informatics Committee at USUHS. He was the

developer and curator of the WWW server in the Department of Pathology at USUHS and has continued the same role here at the AFIP.

Dr. Fontelo collaborates with colleagues in the Infectious Diseases Division of George Washington University investigating schistosomiasis, *Cryptococcus neoformans* infection and the modulating effect of cytokines in mouse models and infectious etiologies of atherosclerosis.

Dr. Albahra joined the Department of Pathology, Good Shepherd Medical Center, Longview, Texas, in January.

Dr. Elsayed joined the Department of Pathology, Wright-Patterson Medical Center, Ohio, in July.

Dr. Emory continues to study sclerosing mesenteritis and is investigating follicular lymphoma of the gastrointestinal tract, proliferation indices of smooth muscle tumors, pneumatosis cystoides intestinalis, proliferation indices and immunohistochemical analysis of *Helicobacter pylori*-related gastric lesions, histologic features of gastritis and gastropathy, and dysplasia in Barrett esophagus. She is a clinical assistant professor of pathology at USUHS and teaches the second-year USUHS medical students and residents at WRAMC and the National Naval Medical Center, Bethesda. She is responsible for coordinating the Gastrointestinal Pathology Radiology Review conferences.

Dr. Hallman is currently investigating smooth muscle tumors of the esophagus and is participating in a study of malignant fibrous histiocytomas of the gastrointestinal tract. He collaborated with the Department of Radiologic Pathology in studies of fibrovascular polyps and leiomyosarcomas of the esophagus.

Dr. Lowry joined the division in July. He was previously chief, Clinical Pathology, and associate armed forces medical examiner, Womack Army Medical Center, Fort Bragg, N.C. He was also the profis battalion surgeon 3/73 Armor 82nd Airborne Division and was deployed to Haiti during Operation Restore/Uphold Democracy. He is currently studying malignant fibrous histiocytomas of the gastrointestinal tract, intussusception associated with lead point lesions, small cell carcinomas of the esophagus, and leiomyomatosis of the esophagus.

CONSULTATION

<i>Cases</i>	<i>Received</i>
Surgical	2,622
Autopsy	34
Military	1,060
Federal	681
Civilian	915
Interdepartmental	321

In the quality diagnosis summary, 27 cases were received without a contributor diagnosis; 1,647 had no change in diagnosis; 953 had a minor change in diagnosis; and 12 cases had a major change in diagnosis.

The cases received represent a mixture of problems, primarily neoplastic and precancerous lesions, as well as inflammatory and degenerative diseases. Among the relatively uncommon lesions that are unusually prominent in our accessions are carcinoids, smooth muscle tumors, lymphomas, small cell carcinomas, and surveillance biopsy specimens for dysplasia in cases of ulcerative colitis and Barrett esophagus.

Staff members participate in the review of consultation cases in the Division of Hepatic Pathology.

RESEARCH

The department is engaged in research that covers several areas of gastrointestinal pathology. Among these are the following:

1. Carcinoid tumors. The department is fortunate to receive a large number of carcinoids in its routine consultation function, and one of its main research directions is aimed at characterizing the morphological, immunohistochemical, and behavioral aspects of these tumors. A number of studies have been published over the past several years, e.g. on rectal, duodenal, gastric, and appendiceal lesions, and work continues using this data base specifically directed at jejunal-ileal carcinoids.
2. Stromal tumors. The department has a large collection of gastrointestinal smooth muscle tumors available for study. Particular attention is being given to determining the malignant potential of these tumors using flow cytometry (in collaboration with the Department of Cellular Pathology). Neurogenic tumors are under study, especially as markers of von Recklinghausen disease and other systemic or hereditary conditions.
3. Incidence and prognosis of histological types of gastrointestinal tumors. This is an analysis of data from the NCI-SEER program comprising a 10% sample of cancer cases in the United States. Incidence and prognosis was studied on the various histological types of tumors at each site in the GI tract.
4. Other areas under study are melanomas of the intestines, mucinous tumors of the appendix, inflammatory bowel disease, gastrointestinal lymphomas (with the Department of Hematologic and Lymphatic Pathology), and gastrointestinal angiosarcomas (with the Department of Soft Tissue Pathology).

EDUCATION

In collaboration with the American Registry of Pathology (ARP), the division organized two courses. On 10 June, it held the first course on endoscopic biopsies of the gastrointestinal tract. This consisted of slides from 200 biopsies available for individual microscopic study under the tutelage of the division's staff. The course was held in the Radiologic Pathology Education Center at the AFIP. The sixth annual course, Surgical Pathology of the Gastrointestinal Tract, was held September 11 and 12 in Washington, D.C. The faculty was drawn from the University of California Medical Center, Los Angeles, as well as from the AFIP. Dr. Sobin was director of both courses.

A live videoconference is conducted biweekly with pathologists from the National Cancer Center (NCC), Tokyo, Japan, to discuss cases selected by both institutions. Experts, staff pathologists, and fellows exchange ideas on the salient diagnostic features of difficult and interesting cases. The conferences are conducted using Internet links. The incoming NCC cases are accessioned and a telepathology report is generated.

The AFIP established its presence in Cyberspace with the launching of its World Wide Web (WWW) server (<http://www.afip.mil>) in August 1995. The Division of Gastrointestinal Pathology was the first AFIP branch to develop WWW pages.

The "Virtual Gastrointestinal Endoscopic Biopsy Course" was the first CME offering on the Internet from the AFIP and first to be accredited by the Center for Advanced Medical Education for Category 1 of the Physician's Recognition Award of the American Medical Association. This interactive course features selected cases from the endoscopic biopsy course given in June 1995 at the AFIP. The course provides the opportunity to review representative images from endoscopic biopsies of gastrointestinal tract lesions. Pathologists can receive up to 1 hour credit for four of these cases presented. There are presently 20 cases in the virtual course.

With a WWW browser like Netscape or Mosaic, a physician can view patient histories, images, the diagnosis, and case discussion. A question and evaluation page linked to every case must be filled

out and submitted in order to obtain CME credit. A certificate of participation is sent through e-mail to responding pathologists.

There were 22 visiting gastroenterology fellows and pathologists who spent between 2 weeks and 3 months each in the division.

A daily conference is held to review all gastrointestinal cases accessioned within the previous 24 hours. It serves as the major educational conference and is part of our quality assurance program. A gastrointestinal radiology-pathology conference is held regularly. The staff also attend the daily hepatic pathology review conference and the weekly hepatic clinical-pathologic conference.

Members of the staff gave lectures at medical schools and hospitals, both military and civilian.

DIVISION GOALS

To provide accurate and timely consultations on military and civilian cases.

To make the division's gastrointestinal pathology courses regular components of our educational mission, attracting both gastroenterologists and pathologists.

To carry out research that exploits the unique collection of lesions in our registry and apply new research techniques to them.

PRESENTATIONS

Leslie H. Sobin, M.D.

1. January 3, February 21, April 17, July 10, August 21, October 10: Washington, D.C., AFIP Radiology Pathology Course. "Introduction to Standard Pathological Nomenclature and Definitions."
2. January 4: Bethesda, Md., NCI National Coordinating Workshop on Prognostic Factors in Cancer. "The TNM Classification and Prognostic Factors in Cancer."
3. January 10: Orlando, Fla., AFIP course, Telemedicine '95. "International Aspects of telepathology."
4. January 14: Scottsdale, Ariz., American Joint Committee on Cancer. "The TNM Classification and Prognostic Factors in Cancer."
5. April 2: Washington, D.C., AFIP course, Abdominal and Gastrointestinal Imaging Review Course. "Radiologic-pathologic Correlations."
6. April 4: Washington, D.C., George Washington University Medical Center, Department of Pathology. "Gastrointestinal Carcinoids and Related Neuroendocrine Lesions."
7. April 6: Washington, D.C., AFIP course, Update and Review of Anatomic Pathology. "Colorectal Polyps: Clinical-pathological Correlations and Diagnostic Pitfalls" and "Gastrointestinal Carcinoids and Neuroendocrine Tumors."
8. April 11-20: Washington, D.C., Georgetown University Medical College. "Pathology of the Gastrointestinal Tract" (6 lectures to second-year medical students).
9. June 1-3: Tromsø, Norway, University of Tromsø Faculty of Medicine. Norwegian Society of Pathology course in Gastrointestinal Pathology. "Gastrointestinal Carcinoids and Neuroendocrine Tumors," "Precancerous Lesions of the GI Tract and Their Imitators," and "Update on Cancer Staging."
10. June 10: Washington, D.C., AFIP course, Endoscopic Biopsies of the Gastrointestinal Tract. "Pitfalls in Diagnosis."
11. July 3-4: Snowmass, Colorado, AFIP course, Controversies and Recent Advances in Surgical Pathology. "Colorectal Polyps: Clinical-pathological Correlations and Diagnostic Pitfalls," "Gastrointestinal Carcinoids and Neuroendocrine Tumors," and "Precancerous Lesions of the GI Tract and Their Imitators."

12. September 11-12: Washington, D.C., AFIP course, Surgical Pathology of the Gastrointestinal Tract. "Colorectal Polyps: Clinical-pathologic Correlations and Pitfalls in Diagnosis," "Upper Gastrointestinal Polyps," "What's New in GI staging," and "Gastrointestinal Carcinoids and Neuroendocrine Tumors."
13. September 16: New Orleans, La., American Society of Clinical Pathologists meeting, Gastrointestinal Pathology Society Symposium on Colorectal Cancer. "Update on Staging of Colorectal Carcinoma."
14. October 20: Budapest, Hungary, Hungarian Society of Pathologists. "Slide Seminar on Colorectal Diseases."
15. October 24: Budapest, Hungary, Semmelweis Symposium. "Update on Staging of Gastrointestinal Cancer."
16. October 27-29: Salzburg, Austria, Austrian Society of Pathology/Austrian Division of International Academy of Pathology. "Slide Seminar on Colorectal Diseases." "Slide Seminar on Endoscopic Biopsies of Colorectal Diseases."
17. November 29: Toronto, Ontario, Canada, National Cancer Institute of Canada Workshop on the Pathologist's Role in the Staging of Cancer. "Update on Staging of Gastrointestinal Cancer."

Paul Fontelo, M.D.

1. March 23-26: Las Vegas, Nev., University of the Philippines Medical Alumni Society in America Annual Spring Meeting, "What Physicians Should Know About the Internet."
2. March 27-29: McClean, Va., "Continuing Medical Education on the World Wide Web," National Forum on Telepresence, Image and Information Systems for Military Telemedicine.
3. April 26-28: Thomas Jefferson University, Philadelphia, Pa. "Self-Instructional HyperCard-based Pathology Case Discussion Modules with Quizzes and Glossary," Computers in Healthcare Education Symposium.
4. June 5-6: The Pentagon, Alexandria, Va., Telemedicine.
5. June 21-24: British Columbia Institute of Technology, Vancouver, British Columbia, Canada, "Continuing Medical Education on the World Wide Web," Slice of Life Workshop.
6. September 15: VA Medical Center, Baltimore, Md., "The Information Superhighway: Telepathology," President's Cancer Panel, National Institutes of Health.
7. September 22: Baltimore, Md., "The Internet and the Pathologist/Telepathology," Maryland Society of Pathology monthly meeting.

PUBLICATIONS

Journal Articles

1. Carr NJ, Monihan JM, Nzeako UC, Murakata LA, Sobin LH. Expression of proliferating cell nuclear antigen in hyperplastic polyps, adenomas and inflammatory cloacogenic polyps of the large intestine. *J Clin Pathol*. 1995;48:46-52.
2. Percy C, Young JL Jr, Muir C, Ries L, Hankey BF, Sobin LH, Berg JW. Histology of cancer. Introduction: incidence and prognosis by histologic type. SEER population-based data: 1973-1987. *Cancer*. 1995;75(suppl):140-146.
3. Thomas RM, Sobin LH. Gastrointestinal cancer: incidence and prognosis by histologic type. SEER population-based data: 1973-1987. *Cancer*. 1995;75(suppl):154-170.
4. Carr NJ, McCarthy WF, Sobin LH. Epithelial noncarcinoid tumors and tumor-like lesions of the appendix: a clinicopathologic study of 184 cases with a multivariate analysis of prognostic factors. *Cancer*. 1995;75:757-768.
5. Schajowicz F, Sissons HA, Sobin LH. The World Health Organization's histologic classification of bone tumors: a commentary on the second edition. *Cancer*. 1995;75:1208-1214.
6. Burke AP, Sobin LH, Virmani R. Localized vasculitis of the gastrointestinal tract. *Am J Surg*

- Pathol.* 1995;19:338-349.
7. Harned RK, Buck JL, Sobin LH. The hamartomatous polyposis syndromes: clinical and radiologic features. *Am J Radiol.* 1995;164:565-571.
 8. Carr NJ, Albahra MA, Nzeako UC, Sobin LH. Proliferating cell nuclear antigen (PCNA) immunoexpression in hyperplastic polyps and adenomas of the appendix. *Int J Surg Pathol.* 1995;2:275-280.
 9. Carr NJ, Remotti H, Sobin LH. Dual carcinoid/epithelial neoplasia of the appendix. *Histopathology.* 1995;27:557-562.
 10. Carr NJ, Sobin LH. Epithelial noncarcinoid tumors and tumor-like lesions of the appendix. *Cancer.* 1995;76:2383-2384. Letter.
 11. Pantongrag-Brown L, Buetow PC, Carr NC, Lichtenstein JE, Buck JL. Calcification and fibrosis in mesenteric carcinoid tumor: CT findings and pathologic correlation. *Am J Radiol.* 1995;164:387-391.
 12. Fontelo P. Protection against cholera. *Science.* 1995;267:437. Letter.
 13. Nelson RL, Davis FG, Sutter E, Kikendall JW, Sobin LH, Milner JA, Bower PE. Serum selenium and colonic neoplastic risk. *Dis Colon Rectum.* 1995;38:1306-1310.
 14. Buetow PC, Buck JL, Carr NJ, Pantongrag-Brown L. Colorectal adenocarcinoma: radiologic-pathologic correlation. *Radiographics.* 1995;15:127-146.

Books and Chapters

1. Hermanek P, Gospodarowicz MK, Henson DE, Hutter RVP, Sobin LH, eds. *Prognostic Factors in Cancer.* Berlin, Germany: Springer-Verlag; 1995.
2. Hermanek P, Maruyama K, Sobin LH. Stomach carcinoma. In: Hermanek P, Gospodarowicz MK, Henson DE, Hutter RVP, Sobin LH, eds. *Prognostic Factors in Cancer.* Berlin, Germany: Springer-Verlag; 1995:47-63.
3. Hermanek P, Sobin LH. Colorectal carcinoma. In: Hermanek P, Gospodarowicz MK, Henson DE, Hutter RVP, Sobin LH, eds. *Prognostic Factors in Cancer.* Berlin, Germany: Springer-Verlag; 1995:64-79.
4. Hermanek P, Sobin LH, Hayat M. Staging classifications. In: *Oxford Textbook of Oncology.* Oxford, England: Oxford University Press; 1995.

Abstracts

1. Monihan JM, Meis-Kindblom JM, Kindblom L-G, Sobin LH. Angiosarcoma of the gastrointestinal tract (AGIT): a study of 18 cases. *Mod Pathol.* 1995;8:65A. Abstract 369.
2. Lauwers G, Grant L, Hendricks J, Carr NJ, Scott G, Sobin L. Comparative study of proliferative activity and DNA ploidy in esophageal spindle cell squamous carcinoma. *Mod Pathol.* 1995;8:64A. Abstract 361.
3. Hartmann DP, Montgomery E, Carr N, Holterman D, Azumi N, Sobin L. Barrett esophagus with dysplasia: a flow cytometric study using paraffin-embedded mucosal biopsies. *Mod Pathol.* 1995;8:62A. Abstract 351.
4. Hong MK, Montgomery EA, Lewis JH, Sobin LH, Allegra CJ, Johnston PG. Correlation of Ki-67 staining pattern and flow cytometry with routine histologic assessment for dysplasia in Barrett's esophagus. *Gastroenterology.* 1995;108:A481.
5. Carr NJ, Warren AY, Taubenberger JK, Lichy JH, Brattbauer GL, Sobin LH. Multiple squamous cell papillomas of the human esophagus unassociated with detectable human *papillomavirus*. *J Pathol.* 1995;176:53A.




CENTER FOR SPECIAL STUDIES IN HEPATOTOXICITY

Hyman J. Zimmerman, M.D., Distinguished Scientist, Emeritus
Director
Date of Appointment - 11 March 1991

MISSION

Our mission is to conduct research on hepatic injury due to drugs and other chemicals; participate in the educational mission of the Armed Forces Institute of Pathology, this department, and other institutions that so request; and provide guidance and consultation on chemical problems relating to hepatic injury.

STAFF

Medical

Hyman J. Zimmerman, M.D.

Administrative

Norine L. Spencer

RESEARCH

1. Study of diclofenac-associated hepatic injury (analysis of 181 cases)
2. Alcohol-associated, acetaminophen-induced injury (analysis of 81 cases)

EDUCATION

The following lectures, courses, and seminars were presented by Dr. Zimmerman:

1. May 16, 1995, American Gastroenterology Association, "History of Treatment of Viral Hepatitis," San Diego, Calif.
2. October 7, 1995, visiting professor, University of Rochester, New York.
3. October 24, 1995, visiting professor, Michigan State University, Lansing, Michigan.
4. December 12, 1995, visiting professor, Albert Einstein College of Medicine, Bronx, New York.

PUBLICATIONS

Journal Articles

1. Boelsterli UA, Zimmerman HJ, Kretz-Rommel A. Idiosyncratic liver toxicity of nonsteroidal antiinflammatory drugs: molecular mechanism and pathology. *Crit Rev Toxicol*. 1995;25:207-235.
2. Zimmerman HJ, Maddrey WC. Acetaminophen (paracetamol) hepatotoxicity with regular intake of alcohol: analysis of instances of therapeutic misadventure. *Hepatology*. 1995;22:767-773.
3. Banks AT, Zimmerman HJ, Ishak KG, Harter JG. Diclofenac-associated hepatotoxicity: analysis of 180 cases reported to the Food and Drug Administration as adverse reactions. *Hepatology*. 1995;22:820-827.
4. Zimmerman HJ, Ishak KG. General aspects of drug-induced liver disease. *Gastroenterol Clin North Am*. 1995;24:739-757.

5. Ishak KG, Zimmerman HJ. Morphologic spectrum of drug-induced hepatic disease. *Gastroenterol Clin North Am.* 1995;24:759-786.

Books and Chapters

1. Zimmerman HJ, Ishak KG. Non-alcoholic steatohepatitis and other forms of pseudoalcoholic liver disease. In: Hall P, ed. *Alcoholic Liver Disease; Pathology and Pathogenesis*. 2nd ed. London, England: Edward Arnold; 1995:175-198.